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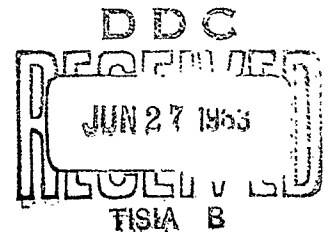
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STUDIES IN MACHINE TRANSLATION:
BIBLIOGRAPHY OF RUSSIAN
SCIENTIFIC ARTICLES

K. E. Harper, D. G. Hays and B. J. Scott



PREPARED FOR:

UNITED STATES AIR FORCE PROJECT RAND

The **RAND** *Corporation*
SANTA MONICA • CALIFORNIA

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This research is sponsored by the United States Air Force under Project RAND—contract No. AF 49(638)-700 monitored by the Directorate of Development Planning, Deputy Chief of Staff, Research and Development, Hq USAF. Views or conclusions contained in this Memorandum should not be interpreted as representing the official opinion or policy of the United States Air Force.

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PREFACE

This Memorandum is one of a series of studies describing work on automatic language data processing at The RAND Corporation. It is a revision of the bibliography published in RM-2069, October 1958. The itemized textual material has been stored on magnetic tape and is available for research purposes.

SUMMARY

This Memorandum, one of a series on computer applications to language study, is a catalogue of the Russian scientific articles currently available at The RAND Corporation on magnetic tape.

The text comprises twelve corpora of physics articles, four of mathematics, seven of astrobotany, and one of cybernetics. Altogether there are 586 articles, totalling 725,921 running words.

A general introduction to this area of research is given in Memorandum RM-2916-PR, while a description of the codes and formats used to represent this text is currently in preparation. The present paper is of most interest to system and procedure designers who require textual material for research or test purposes.

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STUDIES IN MACHINE TRANSLATION--BIBLIOGRAPHY OF RUSSIAN SCIENTIFIC ARTICLES

1. INTRODUCTION

This document is one of a series describing the methods now in use for linguistic research at The RAND Corporation. The present paper catalogues the Russian scientific articles keypunched into IBM cards at The RAND Corporation and presently available on magnetic tape for research purposes.

2. CORPORA

Twenty-four corpora are described in this paper; Table 1 lists these corpora, noting the source publications and specifying the size of each corpus in terms of three quantities: number of articles, number of pages, and number of occurrences (running words).

Corpora 1 and 3 consist of articles selected at Michigan under the direction of A. Koutsoudas; the remaining corpora were prepared at RAND, with H. P. Edmundson chiefly responsible for article selection.

3. BIBLIOGRAPHY

Each of the following bibliographic entries contains both the Russian title and its English translation; the name of the author, transliterated into Roman characters by the RAND rules; the journal or book, volume, date, and

Table 1

SUMMARY OF CORPORA

Corpus Number	Journal ^a	Field	Year	Volume	Size of Corpus		
					Arts.	Pages	Occurrences
1	ZHETF	Physics	1955	28	21	137	31,541
2	DAN	Physics	1955-1956	105-106	27	94	22,148
3	ZHETF	Physics	1955	29	18	176	44,180
4	DAN	Mathematics	1956-1957	106,107, 108,109, 113	28	95	23,858
5	DAN	Physics	1956	106,108, 109	26	100	28,357
	IAN	Physics	1955	19			
6	DAN	Physics	1956	108,110	35	119	27,960
7	DAN	Mathematics	1956	108,110	35	125	27,672
8	DAN	Mathematics	1956	110,111	35	125	26,775
9	DAN	Physics	1956	111	35	122	28,864
B	DAN	Physics	1956-1957	111,112, 113	35	118	28,673
C	DAN	Mathematics	1956-1957	111,114, 116,117	35	126	29,819
D	DAN	Physics	1957	113,114	35	117	29,285
E	DAN	Physics	1957	115	32	110	25,701
F	DAN	Physics	1957	114,116, 117	28	132	34,449
	IAN	Physics	1958	22			
G	IAN	Physics	1958	22	18	133	34,045
	ZHETF		1956	30			

Table 1 (Continued)

SUMMARY OF CORPORA

Corpus Number	Journal ^a	Field	Year	Volume	Size of Corpus		
					Arts.	Pages	Occurrences
H	TAN	Astrobotany	1955	4	13	95	30,826
I	TAN TIKHOMIROV	Astrobotany	1955 1951	4	28	151	34,815
J	KOZLOVA	Astrobotany	1955		12	120	26,277
K	IAN (K) DARCHIYA	Astrobotany	1950-1956	90	13	153	37,040
L	TAN	Astrobotany	1953	1, 2	28	123	35,527
M	TAN	Astrobotany	1953	2	12	107	39,005
N	TAN	Astrobotany	1958	6	12	131	41,354
P	ZHETF	Physics	1956	30	18		
Q	VT PK	Cybernetics Cybernetics	1958 1960	4	7	110	37,750

^aAbbreviations used: Zhetf - Zhurnal Eksperimental'noj i Teoreticheskoy Fiziki (Journal of Experimental and Theoretical Physics); DAN - Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR); IAN - Izvestiya Akademii Nauk SSSR, Seriya Fiziki (Bulletin of the Academy of Sciences of the USSR, Physics Series); IAN (K) = Izvestiya Akademii Nauk KSSR, Seriya Astrobotanicheskaya (Bulletin of the Academy of Sciences of the Kazakhstan SSR, Astrobotany Sector); TAN - Trudy Akademii Nauk KSSR, Sektora Astrobotaniki (Reports of the Academy of Sciences of the Kazakhstan SSR, Astrobotany Sector); Tikhomirov - Sezonnnye Izmeneniya Nekotorykh Otrazhatel'nykh Svoystv Rastenij i Vopros o Rastitel'nosti na Marse (Seasonal Changes in Certain Reflecting Properties of Plants and the Question about Vegetation on Mars); Kozlova - Spektrofotometriya Rastenij Raznykh Klimaticheskikh Zon v Otrazhennykh Luchakh (Spectrophotometry of Plants of Different Climatic Zones in Reflected Rays); Darchiya - Fluoresentsiya rastenij pri obluchenii svetom raznoj dliny volny (The Fluorescence of Plants in Radiation by Light of Different Wave Lengths); PK - Problemy Kibernetiki (Problems in Cybernetics); VT - Vychislitel'naya Tekhnika (Computer Technology).

pagination of the original publication; and the size of the article in the same terms as are used in Table 1. When possible, the translations of titles were taken from the English table of contents published in Doklady Akademii Nauk SSSR; other titles were obtained from Soviet Physics. Some translations had to be prepared at RAND, under the direction of K. E. Harper and H. P. Edmundson. Dolores Mohr prepared and J. A. Wood edited many of the translations. Margaret Kivelson kindly reviewed much of the terminology in physics.

CORPUS 1. SUBJECT FIELD: Physics 21 articles; 137 pages;
31,541 occurrences.

JOURNAL: Zhurnal Eksperimental'noj i Teoreticheskoy Fiziki
(Journal of Experimental and Theoretical Physics), 1955.

Article Number

- A. Migdal, A. B., Teoriya yadernykh reaktsij s obrazovaniem medlennykh chastits (The Theory of Nuclear Reactions with Production of Slow Particles), ZHETF, Vol. 28 (1955), pp. 3-9. 8 pages; 1772 occurrences.
- B. Migdal, A. B., Obrazovanie mezonov pri energii, blizkoj k porogovoj (Meson Production at Near-Threshold Energies), ZHETF, Vol. 28 (1955), pp. 10-12. 4 pages; 725 occurrences.
- C. Sokolik, G. A., Zamechaniya k teorii sliyaniya (Remarks Concerning the Theory of Fusion), ZHETF, Vol. 28 (1955), pp. 13-16. 4 pages; 996 occurrences.
- D. Luchina, A. A., O prodol'nykh kolebaniyakh plazmy. I. (On Longitudinal Vibrations of a Plasma. I.), ZHETF, Vol. 28 (1955), pp. 17-27. 12 pages; 2274 occurrences.
- E. Myakishev, G. Ya., and A. A. Luchina, O prodol'nykh kolebaniyakh plazmy. II. (On Longitudinal Vibrations of a Plasma. II.), ZHETF, Vol. 28 (1955), pp. 28-37. 11 pages; 2654 occurrences.
- F. Al'tshuler, S. A., Rezonansnoe pogloshchenie ul'trazvuka v paramagnitnykh solyakh (Resonance Absorption of Ultrasound in Paramagnetic Salts), ZHETF, Vol. 28 (1955), pp. 38-48. 12 pages; 2579 occurrences.
- G. Al'tshuler, S. A., K teorii elektronnoy i yadernoy paramagnitnoy rezonansy pod vliyaniem ul'trazvuka (On the Theory of Electronic and Nuclear Paramagnetic Resonance Under the Influence of Ultrasonics), ZHETF, Vol. 28 (1955), pp. 49-60. 13 pages; 3533 occurrences.
- H. Krivoglaz, M. A., and Z. A. Matysina, K teorii elektricheskogo soprotivleniya uporyadochivayushchikhsya splavov (On the Theory of the Electrical Resistance of Regulating Alloys), ZHETF, Vol. 28 (1955), pp. 61-69. 10 pages; 2292 occurrences.
- I. Kazantsev, B. I., and P. V. Mejklyar, Regressiya tsentrov skrytogo fotograficheskogo izobrazheniya (Regression of the Centers of the Latent Photographic Image), ZHETF, Vol. 28 (1955), pp. 70-76. 7 pages; 1109 occurrences.

- J. Leont*ev, N. I., Izmeritel* magnitnogo polya, ispol*zuyushchiy magnitnyy rezonans protonov (A Magnetometer Which Makes Use of the Magnetic Resonance of Protons), ZHETF, Vol. 28 (1955), pp. 77-84. 7 pages; 2087 occurrences.
- K. Skanavi, G. I., and A. N. Gubkin, K voprosu ob uchete vnutrennego polya pri relaksatsionnoy polarizatsii v polikristallicheskih dipol*nykh dielektrikakh (The Problem of Calculating the Internal Field for Relaxation Polarization in Polycrystalline Dipole Dielectrics), ZHETF, Vol. 28 (1955), pp. 85-95. 12 pages; 2274 occurrences.
- L. Borodovskaya, L. N., and S. V. Lebedev, Zavisimost* elektroprovodnosti i elektronnoy emissii ot energii metalla v protsesse ego nagrevaniya tokom bol*shoj plotnosti (The Dependence of Electroconductivity and Electron Emission on the Energy of a Metal in the Process of Heating By High-Density Current), ZHETF, Vol. 28 (1955), pp. 96-110. 14 pages; 4040 occurrences.
- M. Belen*kij, S. Z., K teorii mnozhestvennogo obrazovaniya chastits pri bol*shikh energiakh (On the Theory of Multiple Production of Particles at High Energy), ZHETF, Vol. 28 (1955), pp. 111-113. 4 pages; 802 occurrences.
- N. Tsytovich, V. N., K relyativistskim popravkam v zadache dvukh tel (On Relativistic Corrections in the Two Body Problem), ZHETF, Vol. 28 (1955), pp. 113-115. 4 pages; 673 occurrences.
- O. Khajkin, M. S., Ob issledovaniyakh anizotropii poverkhnostnogo soprotivleniya olova pri nizkikh temperaturakh (Concerning Investigations of the Anisotropy of the Surface Resistance of Tin at Low Temperature), ZHETF, Vol. 28 (1955), pp. 115-117. 3 pages; 731 occurrences.
- P. Dishkant, G. P., K voprosu o nezakonnosti odnoj statisticheskoy traktovki kvantovoy mekhaniki (The Problem of the Invalidity of One Statistical Treatment of Quantum Mechanics), ZHETF, Vol. 28 (1955), pp. 117. 1 page; 229 occurrences.
- Q. Rozental*, I. L., K teorii Fermi mnozhestvennogo obrazovaniya chastits pri stolknoveniyakh nuklonov (On the Fermi Theory of the Multiple Production of Particles with the Collisions of Nucleons), ZHETF, Vol. 28 (1955), pp. 118-120. 4 pages; 357 occurrences.

Note: Occasionally pages of a source document consist only of photographs; footnotes were given separate page numbers during the pre-editing stage.

- R. Bonch-Bruevich, V. L., Raspredelenie Fermi pri absolyutnom nule pri uchete vzaimodejstviya elektronov s nulevymi kolebaniyami reshetki (The Fermi Distribution at Absolute Zero Taking into Account the Calculation of the Interaction of Electrons with Zero Point Vibrations of the Lattice), ZHETF, Vol. 28 (1955), pp. 121-122. 2 pages; 401 occurrences.
- S. Yappa, Yu. A., Po povodu stat'i V. I. Karpmana "K voprosu o svyazi mezhdu metodom regulyarizatsii i teoriej chastits s proizvol'nym spinom" (Concerning the Paper by V. I. Karpman "The Problem of the Connection Between the Regularization Method and the Theory of Particles with Arbitrary Spin"), ZHETF, Vol. 28 (1955), pp. 123-124. 2 pages; 813 occurrences.
- T. Zinov*eva, K. N., Poverkhnostnoe natyazhenie zhidkogo He³ v intervale temperatur 0,93 - 3,34°K (The Surface Tension of Liquid He³ in the Temperature Interval 0-93 - 3.34°K), ZHETF, Vol. 28 (1955), p. 125. 1 page; 396 occurrences.
- U. Andronikashvili, E. L., and I. P. Kaverkin, Vrashchenie geliya II pri bol'shikh skorostyakh (Rotation of Helium II at High Speeds), ZHETF, Vol. 28 (1955), pp. 126-127. 2 pages; 804 occurrences.

CORPUS 2. SUBJECT FIELD: Physics 27 articles; 94 pages;
22,148 occurrences.

JOURNAL: Doklady Akademii Nauk SSSR (Reports of the
Academy of Sciences of the USSR), 1955-1956.

Article Number

- A. Bezuglyj, P. A., A. A. Galkin, and G. Ya. Levin, Poverkhnostnoe soprotivlenie olova v sverkhprovodyashchem sostoyanii pri chastote $7,3 \cdot 10^{10}$ gerts (The Surface Resistance of Tin in the Superconductive State at a Frequency of $7,3 \cdot 10^{10}$ cps), DAN, Vol. 105 (1955), pp. 683-684. 2 pages; 432 occurrences.
- B. Bogolyubov, N. N., and D. V. Shirkov, Model* tipa Li v kvantovoj elektrodinamike (A Lie-Type Model in Quantum Electrodynamics), DAN, Vol. 105 (1955), pp. 685-688. 4 pages; 1259 occurrences.
- C. Bonch-Bruevich, V. L., Adiabaticheskoe priblizhenie v teorii funktsii Grina (An Adiabatic Approximation in the Theory of the Green's Function), DAN, Vol. 105 (1955), pp. 689-692. 4 pages; 642 occurrences.
- D. Varfolomeev, A. A., A. S. Romantseva, and V. M. Kutukova, Uglovoe raspredelenie oskolkov pri delenii urana-238 nejtronami razlichnoj energii (The Angular Distribution of Fragments Resulting from the Fission of Uranium-238 by Neutrons of Different Energy), DAN, Vol. 105 (1955), pp. 693-695. 3 pages; 901 occurrences.
- E. Vuks, M. F., and V. L. Litvinov, Issledovanie rasshireniya linii anizotropnogo rasseyaniya sveta u zhidkostej i opredelenie vremeni relaksatsii (An Investigation of the Expansion of the Line of Anisotropic Diffusion of Light in Liquids and a Determination of the Relaxation Time), DAN, Vol. 105 (1955), pp. 696-699. 4 pages; 789 occurrences.
- F. Galanin, M. D., O reabsorbtsii lyuminestsentsii v tonkikh sloyakh (Concerning the Reabsorption of Luminescence in Thin Strata), DAN, Vol. 105 (1955), pp. 700-702. 3 pages; 677 occurrences.
- G. Polievktov-Nikoladze, N. M., O funktsii Grina dlya fotona (On the Green's Function for Photons), DAN, Vol. 105 (1955), pp. 703-705. 3 pages; 859 occurrences.
- H. Akulov, N. S., Teoriya magnitostriksii monokristallov Ni (The Theory of Magnetostriction of Monocrystals of Ni), DAN, Vol. 106 (1956), pp. 31-34. 4 pages; 1120 occurrences.

- I. Biberman, L. M., and E. M. Novodvorskaya, Vliyanie reabsorbtsii na shirinu spektral'nykh liniy (The Influence of Reabsorption on the Width of Spectral Lines), DAN, Vol. 106 (1956), pp. 35-38. 4 pages; 880 occurrences.
- J. Gomon, G. O., O lyuminetsentsii i pogloshchenii svetaalmazom (Concerning the Luminescence and Absorption of Light by a Diamond), DAN, Vol. 105 (1955), pp. 713-715. 3 pages; 985 occurrences.
- K. Frisman, E. V., and V. N. Tsvetkov, Deformatsiya makromolekul v potoke i ee vliyanie na znak dinamicheskogo dvojnogo lucheprelomleniya rastvora polimera (The Deformation of Macromolecules in a Flux and Its Influence on the Sign of the Streaming Birefringence of a Solution of Polymers), DAN, Vol. 106 (1956), pp. 42-45. 4 pages; 822 occurrences.
- L. Popov, K. A., Ob odnoj osnovnoj formule v teorii neobratimyykh termodinamicheskikh protsessov (Concerning a Fundamental Formula in the Theory of Irreversible Thermodynamic Processes), DAN, Vol. 106 (1956), pp. 422-424. 3 pages; 528 occurrences.
- M. Sokolik, G. A., Klassifikatsiya nelinejnykh uravnenij i relyativistski invariantnykh vzaimodejstvij po predstavleniyam gruppy Lorentsa i teoriya slivaniya (A Classification of Nonlinear Equations and Relativistically Invariant Interactions According to Representations of the Lorentz Group and the Theory of Confluence), DAN, Vol. 106 (1956), pp. 429-432. 4 pages; 564 occurrences.
- N. Stekhanov, A. I., Raspredelenie intensivnosti v polose OH spektra kombinatsionnogo rasseyaniya kristalla gipsa (The Distribution of Intensity in the Zone of the OH Spectrum of the Combination Diffusion of a Crystal of Gypsum), DAN, Vol. 106 (1956), pp. 433-436. 4 pages; 1631 occurrences.
- O. Stoyanova, I. G., Elektronnomikroskopicheskoe issledovanie tonkikh sloev sur'my temnopol'nym metodom (An Electron-Microscopic Investigation of Thin Layers of Antimony by the Dark-Field Method), DAN, Vol. 106 (1956), pp. 437-439. 3 pages; 920 occurrences.
- P. Skornyyakov, G. V., and K. A. Ter-Martirosyan, Reshenie zadachi o dvizhenii trekh nuklonov v predel'nom sluchae korotkodejstvuyushchikh sil (A Solution of the Problem Concerning the Movement of Three Nucleons in the Limiting Case of Short Range Forces), DAN, Vol. 106 (1956), pp. 425-428. 4 pages; 748 occurrences.

- Q. Adirovich, E. I., and V. G. Kolotilova, Perekhodnaya kharakteristika poluprovodnikovyykh triodov (A Transitional Characteristic of Semiconductor Triodes), DAN, Vol. 105 (1955), pp. 709-712. 4 pages; 726 occurrences.
- R. Gol*danskij, V. I., A. A. Koval*skij, V. S. Pen*kina, and E. Z. Tarumov, Poperechnye secheniya neuprugogo vzaimodejstviya nejtronov s energiej 120 i 380 Mev s yadrami (The Cross-Section of the Inelastic Interaction of Neutrons of Energy 120 and 380 Mev with Nuclei), DAN, Vol. 106 (1956), pp. 219-222. 4 pages; 1296 occurrences.
- S. Logunov, A. A., Vershinnaya chast* v skalyarnoj elektrodinamike v oblasti bol*shikh impul*sov (The Vertex Part in Scalar Electrodynamics in the Region of High Momentum), DAN, Vol. 106 (1956), pp. 223-225. 3 pages; 277 occurrences.
- T. Sukhanovskij, V. V., K teorii mnogoslójnykh dvukh-komponentnykh dielektricheskikh pokrytij (On the Theory of Multistrata Two Component Dielectric Deposits), DAN, Vol. 106 (1956), pp. 226-229. 4 pages; 687 occurrences.
- U. Trapeznikova, Z. A., and V. V. Shchaenko, Nekotorye opticheskie svojstva novykh tsinksul*fidnykh fosforov, aktivirovannykh redkozemel*nyimi elementami (Certain Optical Properties of New Zinc Sulfide Phosphors, Activated with Rare-Earth Elements), DAN, Vol. 106 (1956), pp. 230-232. 3 pages; 1000 occurrences.
- V. Shifrin, F. Sh., Svyaz* mezhdú elektronnyimi urovnyami energii i mezhdú atomnyimi rasstoyaniyami v molekulakh (The Relation Between Electronic Energy Levels and Interatomic Distances in Molecules), DAN, Vol. 106 (1956), pp. 233-236. 4 pages; 697 occurrences.
- W. Drozdov, S. I., Sechenie pogloshcheniya bystrykh chastits poluprozrachnyimi yadrami (The Cross-Section for Absorption of Fast Particles by Translucent Nuclei), DAN, Vol. 106 (1956), pp. 409-412. 4 pages; 564 occurrences.
- X. Ivanenko, D., and M. Mirianashvili, Nelinejnoe obobshchenie spinornogo Dirakovskogo uravneniya (A Nonlinear Generalization of the Spinor Dirac Equation), DAN, Vol. 106 (1956), pp. 413-414. 2 pages; 429 occurrences.
- Y. Kats, M. L., and B. Z. Semenov, Atomarnye tsentry nikelya v fosforakh NaCl-Ni (Atomic Centers of Nickel in Phosphors of NaCl-Ni), DAN, Vol. 106 (1956), pp. 415-418. 4 pages; 1389 occurrences.

- Z. Kirenskiy, L. V., and V. F. Ivlev, Temperaturnyj gisterezis gal*vanomagnitnogo effekta (The Temperature Hysteresis of the Galvanomagnetic Effect), DAN, Vol. 106 (1956), pp. 419-421. 3 pages; 463 occurrences.
1. Spivak, G. V., and T. N. Dombrovskaya, Elektronno-opticheskiy metod izucheniya dinamiki termicheskikh protsessov v neprozrachnykh sredakh (An Electron-Optical Method of Study of the Dynamics of Thermal Processes in Opaque Media), DAN, Vol. 106 (1956), pp. 39-41. 3 pages; 863 occurrences.

CORPUS 3. SUBJECT FIELD: Physics 18 articles; 176 pages;
44,180 occurrences

JOURNAL: Zhurnal Eksperimental'noj i Teoreticheskoy Fiziki
(Journal of Experimental and Theoretical Physics),
1955.

Article Number

- A. Pekar, S. I., O sushchestvovanii kvantovykh statsionarnykh sostoyaniy tochechnykh nuklonov, vzaimodejstviyushchikh s mezonnyim polem (On the Existence of Quantum Stationary States of Point Nucleons which Interact with Meson Fields), ZHETF, Vol. 29 (1955), pp. 599-604. 6 pages; 1369 occurrences.
- B. Rytov, S. M., Elektromagnitnye svoystva melkosloistoy sredy (Electromagnetic Properties of a Finely Stratified Medium), ZHETF, Vol. 29 (1955), pp. 605-616. 13 pages; 3159 occurrences.
- C. Glembotskij, I. I., V. V. Kibartas, and A. P. Yutsis, Samosoglasovannoe pole Foka v dvukhkonfiguratsionnom priblizhenii dlya atoma bora (Self-Consistent Field of Fock in the Two-Configuration Approximation for the Boron Atom), ZHETF, Vol. 29 (1955), pp. 617-622. 5 pages; 861 occurrences.
- D. Kibartas, V. V., V. I. Kavetskis, and A. P. Yutsis, Samosoglasovannoe pole Foka v trekhkonfiguratsionnom priblizhenii dlya atoma berilliya (Self-Consistent Field of Fock in the Three-Configuration Approximation for the Beryllium Atom), ZHETF, Vol. 29 (1955), pp. 623-628. 6 pages; 1072 occurrences.
- E. Gurevich, L. E., and V. N. Gribov, Dielektricheskie poteri v ionnykh dielektrikakh v sil'nykh elektricheskikh pol'yakh (Dielectric Losses in Ionic Dielectrics in Strong Electric Fields), ZHETF, Vol. 29 (1955), pp. 629-636. 8 pages; 857 occurrences.
- F. Gvozdovery, S. D., and N. M. Ievskaya, Opreделение vremeni prodol'noj relaksatsii pri magnitnom rezonanse atomnykh yader v sil'nom vysokochastotnom magnitnom pole (Determination of the Longitudinal Relaxation Time for Magnetic Resonance of Atomic Nuclei in a Strong High-Frequency Magnetic Field), ZHETF, Vol. 29 (1955), pp. 637-644. 8 pages; 1927 occurrences.

- G. Khokhlov, M. Z., K voprosu o vozmozhnosti izmereniya temperatury kanala fakel'nogo razryada po polose gidroksila 3064 Å (The Problem of the Possibility of Measuring the Temperature of a Jet Discharge Column Using the 3064 Å Hydroxyl Band), ZHETF, Vol. 29 (1955), pp. 645-650. 7 pages; 1664 occurrences.
- H. Solntsev, G. S., and M. M. Dmitrieva, Dvukhelektroodnyj vysokochastotnyj razryad pri davleniyakh ot 100 mm rt. st. do atmosfornogo (Two Electrode High-Frequency Discharge for Pressures from 100 mm Hg to Atmospheric), ZHETF, Vol. 29 (1955), pp. 651-657. 8 pages; 2265 occurrences.
- I. Kizel*, V. A., Izuchenie struktury poverkhnosti zhidkosti metodom otrazheniya sveta (A Study of the Surface Structure of a Liquid by the Method of Reflection of Light), ZHETF, Vol. 29 (1955), pp. 658-668. 11 pages; 2742 occurrences.
- J. Stepanov, A. V., and I. M. Ejduš, O zavisimosti uprugikh postoyannykh monokristallov khloristogo natriya i khloristogo serebra ot temperatury (On the Temperature Dependence of the Elastic Constants of Sodium Chloride and Silver Chloride Monocrystals), ZHETF, Vol. 29 (1955), pp. 669-675. 7 pages; 1832 occurrences.
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JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1956-57.

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2. Shidlovskiy, A. B., Ob algebraicheskoy nezavisimosti transtsendentnykh chisel odnogo klassa (On Algebraic Independence of Transcendental Numbers of One Class), DAN, Vol. 108 (1956), pp. 400-403. 4 pages; 1133 occurrences.

CORPUS 5. SUBJECT FIELD: Physics 26 articles; 100 pages;
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JOURNAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya
(Bulletin of the Academy of Sciences of the USSR,
Physics Series), 1955.

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- J. Vul*fson, K. S., Novyj metod izmereniya skorosti sveta (A New Method of Measuring the Velocity of Light), DAN, Vol. 109 (1956), pp. 929-930. 2 pages; 567 occurrences.
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CORPUS 6. SUBJECT FIELD: Physics 35 articles; 119 pages;
27,960 occurrences

JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1956.

Article Number

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CORPUS 7. SUBJECT FIELD: Mathematics. 35 articles; 125 pages;
27,672 occurrences

JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1956.

Article Number

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- Y. Koshelev, A. I., Ob ogranichenности v L_2 proizvodnykh reshenij ellipticheskikh uravnenij i sistem (On the Boundedness in L_2 of the Derivatives of Solutions of Elliptical Equations and Elliptical Systems), DAN, Vol. 110 (1956), pp. 323-325. 3 pages; 730 occurrences.
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CORPUS 8. SUBJECT FIELD: Mathematics 35 articles; 125 pages; 26,775 occurrences.

JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1956.

Article Number

- A. Vorovich, I. I., O nekotorykh sluchayakh sushchestvovaniya periodicheskikh reshenij (On Some Cases of Existence of Periodic Solutions), DAN, Vol. 110 (1956), pp. 165-168. 4 pages; 804 occurrences.
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- Q. Krasnosel'skij, M. A., S. G. Krejn, and P. E. Sobolevskij, O differentsial'nykh uravneniyakh s neogranichennymi operatorami v banakhovykh prostranstvakh (Differential Equations with Unbounded Operators in Banach Spaces), DAN, Vol. 111 (1956), pp. 19-22. 4 pages; 1093 occurrences.

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CORPUS 9. SUBJECT FIELD: Physics. 35 articles; 122 pages; 28,864 occurrences.

JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1956.

Article Number

- A. Gavrilovskij, B. V., V. Ya. Golovnya, K. V. Karadzhev, A. P. Klyucharev, and V. I. Man*ko, Polyarizatsiya protonov maloj energii pri rasseyanii na uglerode (Polarization of Small Energy Protons During Scattering by Carbon), DAN, Vol. 111 (1956), pp. 59-62. 4 pages; 1126 occurrences.
- B. Glauberman, A. E., K teorii real*nogo gaza s netsentral*nym zakonom vzaimodejstviya chastits (On the Theory of a Real Gas with a Noncentral Interaction of the Particle), DAN, Vol. 111 (1956), pp. 63-66. 4 pages; 532 occurrences.
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CORPUS D. SUBJECT FIELD: Physics 35 articles; 117 pages;
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JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1957.

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CORPUS E. SUBJECT FIELD: Physics 32 articles; 110 pages
25,701 occurrences

JOURNAL: Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), 1957.

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CORPUS F. SUBJECT FIELD: Physics 28 articles; 132 pages;
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Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya (Bulletin of the Academy of Sciences of the USSR, Physics Series), 1958.

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CORPUS H. SUBJECT FIELD: Astrobotany 13 articles; 95 pages;
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- V. Tikhomirov, Glava 2. Metodika raboty (Chapter 2. The Method of Work), pp. 12-26. 15 pages; 3711 occurrences.
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- Z. Tikhomirov, Vyvody (Conclusions), pp. 98-99. 3 pages; 576 occurrences.
1. Tikhomirov, Zaklyuchenie (Final Remarks), pp. 100-101. 2 pages; 444 occurrences.
2. Tikhomirov, Oglavlenie (Index), pp. 102-103. 2 pages; 267 occurrences.

CORPUS J. SUBJECT FIELD: Astrobotany 12 articles; 120 pages;
26,277 occurrences.

JOURNAL: Kozlova, K. I., Spektrofotometriya rastenij raznykh klimaticheskikh zon v otrazhennykh luchakh (Spectrophotometry of Plants of Different Climatic Zones in Reflected Rays), Izdatel'stvo Akademii Nauk Kazakhstoj SSR (Published by The Academy of Sciences of the Kazakhstan SSR), Alma Ata, 1955.

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- A. Front Matter and Vvedenie (Introduction), pp. 1-4.
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- B. Glava 1. Kratkij istoricheskij obzor (Chapter 1: A Short Historical Summary), pp. 5-22. 18 pages;
6410 occurrences.
- C. Glava 2. Kratkoe opisanie rajonov polevykh rabot (Chapter 2: A Short Description of the Regions of Field Work), pp. 23-33. 10 pages; 2520 occurrences.
- D. Glava 3. Metodika raboty (Chapter 3: Method of Work), pp. 34-54. 21 pages; 4218 occurrences.
- E. Glava 4. Spektrofotometriya rastenij v vidimoj oblasti spektra (Chapter 4: Spectrophotometry of Plants in the Visible Region of the Spectrum), pp. 55-75. 17 pages;
2870 occurrences.
- F. Glava 5. Spektrofotometriya tsvetov rastenij razlichnoj okraski v vidimom uchastke spektra (Chapter 5: Spectrophotometry of the Colors of Plants of Different Shades in the Visible Part of the Spectrum), pp. 76-89.
13 pages; 2886 occurrences.
- G. Glava 6. Spektrofotometriya rastenij v blizhnikh infrakrasnykh luchakh (Chapter 6: Spectrophotometry of Plants in Near-Infrared Rays), pp. 90-111. 16 pages;
2898 occurrences.
- H. Glava 7. Sravnenie spektral'nykh krivykh otrazheniya "morej" Marsa i nekotorykh zemnykh rastenij (Chapter 7: Comparison of the Spectral Reflection Curves of the "Seas" of Mars and of Earth Plants), pp. 112-124.
13 pages; 2321 occurrences.
- I. Vyvody (Conclusions), pp. 125-128. 3 pages; 821 occurrences.
- J. Zaklyuchenie (Final Remarks), pp. 128-129. 2 pages;
315 occurrences.

- K. Oglavlenie (Index), pp. 205-206. 2 pages; 325 occurrences.
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CORPUS K. SUBJECT FIELD: Astrobotany 13 articles; 153 pages;
37,040 occurrences.

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- F. Darchiya, (Front Matter), pp. 1-4. 4 pages; 398 occurrences.
- G. Darchiya, Glava 1. Istoriya voprosa (Chapter 1. History of the Question), pp. 5-20. 17 pages; 5447 occurrences.
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- I. Darchiya, Glava 3. Metodika obrabotki poluchennogo materiala (Chapter 3. The Method of Processing the Material Obtained), pp. 42-57. 17 pages; 3512 occurrences.
- J. Darchiya, Glava 4. Ob/ekty issledovaniya i ikh opisaniye (Chapter 4. The Objects of Investigation and Their Description), pp. 58-71. 13 pages; 3789 occurrences.
- K. Darchiya, Glava 5. Rezul*taty i vyvody raboty (Chapter 5. Results and Conclusions of the Work), pp. 72-100. 29 pages; 5397 occurrences.
- L. Darchiya, Vyvody (Conclusions), pp. 101-103. 3 pages; 570 occurrences.
- M. Darchiya, Oglavlenie (Index), 2 pages; 230 occurrences.

CORPUS L. SUBJECT FIELD: Astrobotany 28 articles; 123 pages;
35,527 occurrences.

JOURNAL: Trudy Akademii Nauk KSSR, Sektora Astrobotaniki
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Kazakhstan SSR, Astrobotany Sector), 1953.

Article Number

- A. Front Matter, TAN, Vol. 1 (1953), pp.1-2. 3 pages;
57 occurrences.
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- C. Bajda, Kh. S., and N. I. Suvorov, Obshchebiologicheskoe
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- D. Shtaude, N. M., K metodike obrabotki spektrogramm
samoizlucheniya rasteniy (The Method of Treatment of
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- E. Tikhomirov, V. S., Ob amplitude sezonnykh izmeneniy
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Determined by the Longitudinal Spectrograph Method),
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Novoj Gerkulesa 1934 (The Spectrophotometric Temperature
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5 pages; 1318 occurrences.

- J. Kucherov, N. I., Vybor mesta dlya postrojki planetnoj observatorii (The Selection of a Site for Construction of a Planetary Observatory), TAN, Vol. 1 (1953), pp. 73-81. 6 pages; 1645 occurrences.
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- L. Bajda, Kh. S., Utrennee zasedanie 27 Sentyabrya (preniya) Vystuplenie Kh. S. Bajdy (Morning Session, 27 September (Discussion) Report of Kh. S. Bajda), TAN, Vol. 2 (1953), pp. 115-116. 3 pages; 699 occurrences.
- M. Kozlova, K. I., Vystuplenie K. I. Kozlovoj (Report of K. I. Kozlova), TAN, Vol. 2 (1953), pp. 117-123. 7 pages; 2120 occurrences.
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- V. Kutyreva, A. P., Zaklyuchitel*noe slovo A. P. Kutyrevoj (Concluding Words of A. P. Kutyreva), TAN, Vol. 2 (1953), pp. 151-156. 7 pages; 2558 occurrences.

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CORPUS M. SUBJECT FIELD: Astrobotany 12 articles; 107 pages;
39,005 occurrences.

JOURNAL: Trudy Akademii Nauk KSSR.
Diskussiya na temu: Osnovnie dostizheniya sektora
astrobotaniki i vopros o vozmozhnosti zhizni na
drugikh planetakh.
(Works of the Academy of Sciences of the
Kazakhstan SSR), 1953.
(Discussions on the Theme: Basic Achievements of
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Article Number

- A. Front Matter, TAN, Vol. 2 (1953), pp. 1-8. 6 pages;
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CORPUS N. SUBJECT FIELD: Astrobotany 12 articles; 131 pages;
41,354 occurrences.

JOURNAL: Trudy Akademii Nauk KSSR (Works of the Academy of Sciences of the Kazakhstan SSR), 1958.

Article Number

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- M. Tolpygo, K. B., and Z. I. Uritskij, K teorii podvizhnosti polyarona (The Theory of Mobility of a Polaron), ZHETF, Vol. 30 (1956), pp. 929-937. 9 pages; 1851 occurrences.
- N. Lifshits, I. M., and G. I. Stepanova, O spektre kolebaniy neuporyadochennykh kristallicheskikh reshetok (The Oscillation Spectrum of Disordered Crystal Lattices), ZHETF, Vol. 30 (1956), pp. 938-946. 10 pages; 1905 occurrences.
- O. Deryagin, B. V., and I. I. Abrikosova, Pryamye izmereniya molekulyarnogo prityazheniya tverdykh tel. I. (Direct Measurements of the Molecular Attraction of Solid Bodies. I.), ZHETF, Vol. 30 (1956), pp. 993-1000. 15 pages; 5383 occurrences.
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CORPUS Q. SUBJECT FIELD: Cybernetics 7 articles; 110 pages;
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JOURNAL: Vychislitel'naya Tekhnika, Akademiya Nauk SSSR, Institut Tochnoj Mekhaniki i Vychislitel'noj Tekhniki, Izdatel'stvo Akademii Nauk SSSR, (Computer Technology, Academy of Sciences of the USSR, Institute of Precise Mechanics and Computer Technology, published by the Academy of Sciences USSR), Moscow, 1958.

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Article Number

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